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ABSTRACT

The 500th anniversary of the Columbian discovery of America is upon us, and with it the obligation to assess existing interpretations of the significance of the voyage and establishment of permanent links between the Old and New Worlds. The traditional, or bardic, version of the Columbian voyages and their consequences was the product of narrative historians who wrote about the American past in ways consonant both with the documentary record then available and with the ethnocentrism of their fellow white citizens of the New World. Though popular, it is deceptive because it takes a selective view of history, reinforces Euro-American ethnocentrism, and confirms premises and approaches clearly obsolete in the late 20th century. The analytic interpretation takes a more scientific, less romantic view of the voyages, their motives and consequences. These historians open themselves to geology, climatology, biology, epidemiology, and other fields. They are scientific in their research and in attempts to limit bias. Examples of historical interpretation from each school of thought are presented. The Columbian influence on the Old and New Worlds is assessed; and intellectual, economic, nutritional, and demographic effects are discussed. Finally, the legacy of the Columbian exchange is reviewed in terms of its effects on world population and ethnic composition. (GEA)

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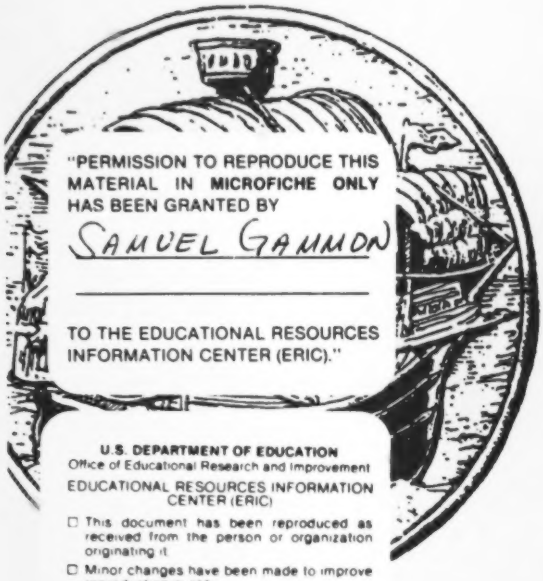
The Columbian Voyages, the Columbian Exchange, and Their Historians

Alfred W. Crosby



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American Historical Association

Essays on Global and Comparative History

The Columbian Voyages, the Columbian Exchange, and Their Historians

by

Alfred W. Crosby

With a Foreword by Michael Adas, Series Editor

American Historical Association
400 A Street SE, Washington, DC 20003

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Foreword

Given the previously rather peripheral position of global and comparative history in the discipline, the growth of interest in these fields over the past three decades or so has been truly remarkable. The appearance of numerous works by prominent scholars on transcultural interaction and on variations in social systems and political economies, the great proliferation at both the college and secondary-school level of courses on world history and numerous textbooks with which to teach them, and the formation in recent years of the World History Association, an affiliate of the American Historical Association, all testify to the increasing importance of global and comparative scholarship and teaching within the historical profession. In some ways these developments represent a revival, for world or cross-cultural history is as ancient as Herodotus, and it enjoyed particular favor among Western intellectuals from the eighteenth to the early twentieth centuries. But challenges to the grand designs or underlying "laws" that writers like Spengler or Toynbee discerned in human history, as well as an increasing emphasis on area specialization within the discipline as a whole, led to doubts about the feasibility or even the advisability of attempting to generalize across vast swaths of time and space. In scholarship, world history came to be seen as a pastime for dilettantes or popularists; in teaching, it was increasingly equated with unfocused social studies courses at the secondary-school level.

Though the current interest in global history reflects a continuing fascination with the broad patterns of human development across cultures that were the focus for earlier works on world history, the "new" global or world history differs in fundamental ways from its predecessors. Writers of the new global history are less concerned with comprehensiveness or with providing a total chronology of human events. Their works tend to be thematically focused on recurring processes like war and colonization or on cross-cultural patterns like the spread of disease, technology, and trading networks. Their works are often more consciously and systematically comparative than the studies of earlier world historians. Partly because the research of area specialists has provided today's scholars with a good deal more data than was available to earlier writers, the best recent works on global history also display a far greater sensitivity than the more comprehensive world surveys to cultural nuances and the intricacies of the internal histories of the societies they cover. In addition,

few practitioners of the new global history see their task as one of establishing universal "laws" or of identifying an overall teleological meaning in human development. Their main concerns are the study of recurring processes and the dynamics and effects of cross-cultural interaction. Depending on their original area orientation, global and comparative historians adopt these approaches because they see them as the most effective way of bringing the experience of the "people without history" into the mainstream of teaching and scholarship, of relating the development of Europe to that of the rest of the world, or of challenging the misleading myth of exceptionalism that has dominated so much of the work on the history of the United States.

This series of essays is intended to provide an introduction to the new world history. Each pamphlet explores some of the interpretations and understandings that have resulted from cross-cultural and comparative historical studies undertaken in the past three or four decades. The pamphlets are designed to assist both college and secondary-school teachers who are engaged in teaching courses on world history or courses with a comparative format. Each essay is authored by an expert on the time period or process in question. Though brief lists of works that teachers might consult for more detailed information on the topic covered are included in each of the pamphlets, the essays are not intended to be bibliographic surveys. Their central aim is to provide teachers facing the formidable task of preparing courses that are global or cross-cultural in scope with a sense of some of the issues that have been of interest to scholars working in these areas in recent decades. The essays deal with specific findings and the debates these have often generated, as well as broad patterns that cross-cultural study has revealed and their implications for the history of specific societies. Although all of the essays are thematically oriented, some are organized around particular historical eras like the age of Islamic expansion or the decades of industrialization, while others are focused on key topics like slavery or revolution. Because there are many approaches to global history, these essays vary in format and content, from ones that are argumentative and highly interpretive to others that concentrate on giving an overview of major patterns or processes in global development. Each essay, however, suggests some of the most effective ways of dealing with the topic or era covered, given the current state of our knowledge. In recognition of the quincentenary of Columbus's "discovery" of the Americas, the series begins with an essay on the impact of the processes set in motion by his voyages. Subsequent pamphlets cover topics and time periods

from the era of early European overseas expansion to the present and then from the era of expansion back to the time of the Neolithic Revolution.

Michael Adas, Series Editor
Professor of History
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Historical Interpretations of the Columbian Voyages

The five hundredth anniversary of the Columbian discovery of America is upon us, and with it the obligation to assess existing interpretations of the significance of that voyage and the establishment of permanent links between the Old and New Worlds. The most influential of the several schools of interpretation are, on the one hand, the newest and analytic, and on the other, the classic and bardic. The former is for many recondite and discomforting. The latter, the one most often taught, dramatized, and believed in North America, is for most as comfortable as an old pair of slippers: We learned it in primary school.

The Bardic Interpretation

The bardic version of the Columbian voyages and their consequences was the product of narrative historians, most of them nineteenth-century writers, who did their work when the peoples of the republics of the New World looked upon the Americas as fresh and "without sin," at least as compared to "decadent" Europe. These historians narrated the American past in ways consonant both with the documentary record then available and with the ethnocentrism of their fellow white citizens of the New World, particularly of the United States. Their readers wanted history books to provide a story of "the steps by which a favoring Providence, calling our institutions into being, has conducted the country to its present happiness and glory,"[1] to quote the innocently arrogant George Bancroft, whose ten-volume *History of the United States* (1834–76) we no longer read but have never forgotten.

The classic narrative that Bancroft and his successors provided can be summarized as follows: At the end of the fifteenth century Christopher Columbus discovered America, adding to the world two

continents populated sparsely with "savages" and, in Mexico and Peru, with "barbarians" experimenting with protocivilization. Then the conquistadores, few in number but courageous, conquered the Amerindian civilizations, which, for all their temples and gold, were evidently no more than paper tigers. Lesser conquistadores performed similarly, if less profitably, in other places, most of them also in tropical America, as did their Portuguese counterparts in coastal Brazil. British, French, Dutch, and other European soldiers, merchants, and settlers did much the same thing in those parts of the New World not yet claimed by the Iberians. The history of the New World subsequently became the struggle of European imperialist powers for domination, and Amerindians ceased to be important, except as enemies or allies of whites. Afro-Americans, the other of the two non-European peoples who made major contributions to the development of the modern Americas, were obviously present in large numbers during the colonial period but were almost invisible in American history until the Haitian revolt at the end of the eighteenth century, usually viewed as a nightmarish aberration from the "normal" pattern of colonization in the Americas. The Columbian era, the period of European exploration and colonization, ended in the decades around 1800 with successful revolutions led by whites, usually of good family and education, against the parent-countries. Then came the maturation of independent societies and cultures in the New World, a development paradoxically confirmed and made irreversible by the migration of very large numbers of Europeans to the Americas after the mid-nineteenth century.

This narrative is the version of history that most Americans learned as children. It is also a cautionary tale (or interpretation) for scholars and teachers. The bardic version is as deceptive as it is popular because it is the product of an age that is past, with a characteristically selective view of history. It is as dangerous as it is deceptive because it reinforces Euro-American ethnocentrism and confirms historians and teachers in premises and approaches clearly obsolete on the eve of the Columbian quincentennial. On the other hand, this classic interpretation is rational and true to the original sources. That it can be rational as well as deceptive is perhaps a useful lesson for seekers after absolute truth in history.

Rather than make a display of our "superiority" over scholars now dead and buried (thus anticipating the smugness of our own successors), let us praise our forebears. They were skilled practitioners of the historian's craft who did their work well, enabling the present generation of historians to make progress, rather than mere corrections. Men like Spain's Martín Fernández de Navarette and Canada's

Henri-Raymond Casgrain drew together the documentary evidence that forms the core of what even revisionists must begin with, and assembled the bare data of who was who and where and when. These scholars performed the laborious work that is preliminary to creative scholarship in any field of history. Among them were creative scholars of the first rank who built a model of the past that reconciled the record as they knew it with the values of their own day and made sense to the literate classes of their time. This is what society pays historians to do.

Two of the best of these bardic historians were New England's William Prescott, historian of the Spanish conquest of Mexico and Peru, and Francis Parkman, the Homer of the struggle of Britain and France for empire in North America. Another was Samuel Eliot Morison, whose 1942 biography of Columbus and two-volume *The European Discovery of America* (New York, 1971, 1974) are as close to being definitive works as one can expect in this mutable world. These men all liked to approach history through biography; they chose sides and were transparently loyal to their heroes. For all three men, the stuff of history was almost always documents, preferably letters, diaries, and memoirs, and not statistics. Seldom did they turn for help to economics, archaeology, biology, or any of the sciences, which resulted in some startling omissions. Prescott managed to write magnificent books on the conquests of Mexico and Peru and omit all but the bare mention of the conqueror's best ally, smallpox. The information on smallpox was in the original sources but not within the range of what Prescott was equipped to perceive as important.

The books of the bardic historians were usually neatly organized around great white men, a strategy whose validity seemed to be confirmed by contemporary events. Prescott did not worry his sources like a dog with an old shoe to find the *real* reason for the success of Cortés and Pizarro, because he lived in an era when white people seemingly always won their wars with nonwhites. In the Second Opium War, Queen Victoria's plenipotentiary opined that "twenty-four determined [white] men with revolvers and a sufficient number of cartridges might walk through China from one end to the other."[2] Bardic historians thought in terms of biography, and why not? They were children of the nineteenth century, the golden age of rugged individualism and industrial capitalism. It was also an age of rampant nationalism, and when historians thought in terms of large groups of humans, they thought of the nation-state and not of tribes or cultures or language families. It was an age of unembarrassed elitism and racism, and historians tended to ignore plebians in particular and non-Europeans in general. (Prescott

and Parkman were in part exceptions, paying a full measure of attention to Amerindians, at least in so far as they influenced Euro-American destinies.) These historians were not much better equipped intellectually to notice those whom Eric R. Wolf called the "people without history"[3] than they were to judge the stability of ecosystems. The social sciences and biology were new; ecology was not born until after Prescott and Parkman died, and was still immature when Morison was middle-aged.

The Analytic Interpretation

America's classic historians did not even try to answer many of the questions that concern us at the end of the twentieth century because neither they nor their audiences were asking such questions. There were a few fresh minds, however, who provided new ways of looking at the world, which led to new ways of sorting data and new kinds of inquiries. Among the greatest of these innovators were Charles Darwin, Karl Marx, and Louis Pasteur, celebrants of paradox who emphasized the importance of instability and the immense power of the humble, even the invisible. Travelers and archaeologists, at a different level intellectually but no less influential, kept exploring and digging, turning up evidence of dense pre-Columbian populations in the Americas, of peoples of undeniably high culture. Who could continue to think of the Maya as savages after John L. Stephen's volumes and Frederick Catherwood's prints? After the works of W. E. B. Du Bois and Melville Herskovits, what excuse remained for a historian to claim that there was nothing to learn about Africans or Afro-Americans?

Above all, after the hell-for-leather advance of the Japanese military in the early 1940s and the swift collapse of Europe's overseas empires in the following two decades (as astonishing, in its way, as the collapse of the Amerindian empires four centuries earlier), there could be no more doubt that a great many of the "people without history" must have at least some history. The effect on the historical profession of the experiences of the last half-century has been like that on astronomers of the discovery that the faint smudges seen between the stars of the Milky Way were really distant galaxies.

The obsolescence of old conceptions persuaded historians to take a fresh look at the origins of European imperialism: perhaps elements less dramatic than gold and God and heroes had been involved. Charles Verlinden led the way by tracing the roots of European imperialism to the Mediterranean in the age of the Crusades, where organizational structures and exploitative techniques that would be imposed on

America in the sixteenth century were first tried, and where Europeans first learned to like sugar and to raise it for profitable export to their homelands. Verlinden followed the precursors of conquerors like Cortés and the plantation owners of Brazil from the Levant to the islands of the eastern Atlantic. There, in the triangle of the great western ocean that has Iberia, the Azores, and the Canaries as its boundary stones—an expanse that Pierre Chaunu has shrewdly called the "Mediterranean Atlantic"[4]—the sailors of southern and western Europe studied the patterns of oceanic winds and learned to be blue-water sailors and how to sail to America and Asia. In Madeira white settlers, often led by down-at-the heels Iberian nobility seeking land and wealth to match their titles, discovered how to make a lot of money raising sugar; in the Canaries they learned how swiftly a fierce aboriginal people, the Guanches, could disappear and how easily they could be replaced with imported labor to raise tropical crops for the European market.

While historians of the Middle Ages and Renaissance were disinterring the roots of European imperialism, the students of the Americas and Amerindians were revolutionizing their disciplines. Archaeology thrust the beginnings of American history back at least fifteen thousand years and populated these millenia and both American continents with myriads of clever and mysterious people. Social scientists devised means, often quantitative, to tap into the history of undocumented peoples. The contribution of demographic historians has been of particular value, providing a structure within which other historians can find niches for their own discoveries. Historians opened themselves to (or, fearing obsolescence, rushed to ransack) geology, climatology, biology, epidemiology, and other fields. As a result, the kind of grain that is poured into the historian's mill today would wear out Leopold von Ranke's grindstones. Historians are scientific not only in the care they take with research and attempts to limit bias, but also in their exploitation of whatever the sciences provide that is pertinent to the study of the human past.

European historians of the *Annales* school, centered in France, have been the most noted practitioners of this new kind of history, but similar advances in technique have been developed in the New World and applied to the study of the Amerindian past and the impact of the Columbian voyages on American history. The Berkeley school, as it is loosely and sometimes inaccurately called, led by geographer Carl Ortwin Sauer, physiologist Sherburne F. Cook, and historians Woodrow Borah and Lesley Byrd Simpson, began as far back as the 1930s to reassess pre-Columbian and Amerindian history. They used

many kinds of nondocumentary data—geological and botanical, among others—and re-examined, and many times examined for the first time, the yellowed sheets of tribute, tax, and population records of the Spanish empire. The Berkeley school has revolutionized American historiography. Not everyone accepts their conclusions, but their questions—rarely asked before except by proponents of *indigenismo* and *indianismo*—plot the course of historical research in the immediate pre- and post-Columbian centuries in America.

There has been a renewal of interest in the whole picture, the world, and therefore in global history. The forces that propelled Columbus and the forces that the European discovery and exploitation of America triggered were supranational and supracontinental. Columbian and post-Columbian exchanges of raw materials, manufactured products, and organisms cannot be described or analyzed to the full extent of their significance within any unit smaller than the world. Scholars of worldly sophistication have accepted the challenge: Fernand Braudel, William McNeill, Immanuel Wallerstein, Eric R. Wolf, and others. Their work leads us to lands, cultures, and questions that the bardic historians of Columbus rarely considered. To cite one example, nearly a hundred years before Columbus and other European mariners crossed the great oceans, the Chinese admiral Cheng Ho launched a succession of huge fleets, manned by thousands, around the Malay Peninsula and across the Indian Ocean as far as East Africa. After this the Chinese ceased their transoceanic voyaging completely. Cheng Ho inspires today's world historians to ask two questions that would never have occurred to Prescott, Parkman, or even Morison: Why did the Chinese stop their voyaging, and, the obvious corollary but not a question asked by Western historians until the present, why did European voyagers start and never stop?

There are vast expanses of time and territory in the new history of the Americas as yet not even roughly surveyed, and the work of detailed description must be left to the next century. There is no body of received wisdom about the New World, but there is a new model of New World history for our consideration and use.

America's classic historians were successful in part because their scope was narrow. They wrote almost exclusively about white heroes in the last five hundred years, while today's analytic historians are concerned with the masses of people of numerous ethnic groups in a much larger time frame. To understand how these peoples fared after they met in 1492, we need to know at least something about the species of plants, animals, and microlife associated with them. To know that, we have to go back further than most of our Victorian ancestors thought there was anything to go back to.

The Old and New Worlds had been separate for millions of years before Columbus, except for periodic reconnections in the far north during Ice Ages. In this immense period the biotas of the Old and New Worlds evolved and diverged. As of 1492, there were many similar species, especially in Eurasia and North America, such as deer and elm, but the differences were impressive. Europe had nothing quite like hummingbirds, rattlesnakes, and hickory and pecan trees. Further south the contrasts between Old and New World biotas were even more amazing. The biggest mammal in Africa was the elephant; in South America, the cow-sized tapir. The native biotas of the Old and New Worlds were decidedly different, and for most of the previous few million years these biotas had not been in competition or even in contact.

The last bout of competition before the arrival of Columbus included the intial migration into America of the Old World's *Homo sapiens* and the spread of that species from the Arctic Sea to Tierra del Fuego, affecting changes as yet only partly understood. After the last Ice Age ended some ten thousand years ago and the continental glaciers melted back, releasing so much water that the land connection between Siberia and Alaska was innundated, the ancestors of the Amerindians were left in complete or nearly complete isolation. They developed autochthonous cultures, domesticated American plants and animals, and adapted to American microlife. In 1492 they were living in equilibrium with each other and with the other tenants of the New World, macro and micro. This homeostasis no doubt wobbled considerably, even violently, in areas with thick settlements of Amerindian farmers, but in all probability it was more stable then than it has been since.

During the same ten-thousand-year period, peoples of the Old World, in adjustment to the biotas of their continents, engendered their cultures and domesticated and bred their crops, beasts, and, unintentionally of course, their own set of pesky and sometimes fatal germs. These humans were also elements in a system that varied constantly but which was, within broad limits, stable. They even had a modus vivendi with the plague, which had reared up in the fourteenth century and killed approximately one-third of the population of western Eurasia and North Africa. By 1500, however, the European population had recovered its pre–Black Death totals and was growing, despite recurrent waves of plague and other deadly diseases.

In 1492 these two systems of homeostasis, one of the Old World and the other of the New World, like tightrope walkers with poles dipping and lifting to maintain balance, collided.

The Old World peoples had some distinct advantages in the biological

competition that followed. Although their crop plants were not superior to those of the Amerindians per se—wheat, rice, and yams were "better" than maize, potatoes, and cassava in some ways and inferior in others—the Old World advantage in domesticated animals was great. It was a matter of the Old World's horses, cattle, pigs, goats, sheep, and other domesticated species versus the New World's llamas, guinea pigs, domesticated fowl, and dogs. This advantage was not permanent, because Amerindians adopted many of the new livestock, most spectacularly horses in the Great Plains and pampa, where these animals helped the Amerindians to maintain their independence until the last half of the nineteenth century. The greatest influence of Old World plants and animals was probably in making it possible for Old World pastoralists and farmers to live in the American colonies as they had at home or, in most cases, better. Old World livestock, which had evolved in what seemingly had been a rougher league than the New World's, often outfought, outran, or at least out-reproduced American predators. Free of the diseases and pests that had preyed on them at home, the European animals thrived and even went wild, often in amazing numbers, providing mounts, meat, milk, and leather much more cheaply in the New World than in the Old. The most spectacular instances of this were in southern South America. The first Spanish attempt to colonize the pampa failed in the 1530s, and the survivors departed, leaving some livestock behind. When settlers returned in 1580 they found "infinite" herds of horses. In 1587 Hernando Arias left one hundred cattle behind him at Santa Fé de Paraná in Brazil, and when he returned in 1607 he found, according to his testimony, one hundred thousand. These Iberians were speaking colorfully, rather than statistically, but the natural increase in the feral herds of South America was indeed enormous, probably unprecedented in all history. Smaller but comparable explosions in animal populations took place elsewhere in the New World.

The decisive advantage of the human invaders of America was not their plants or animals—and certainly not their muskets and rifles, which Amerindians eventually obtained in quantity—but their diseases. The aboriginal Americans had their own diseases (several of them, like Chargas's disease and Carrion's disease, were as indigenous to the Americas as hummingbirds and tapirs), but the number of these was insignificant compared to the sum of those that came to the New World from the Old after 1492. There is debate about whether certain diseases did or did not exist in America before 1492. Yellow fever, for example, is probably African, but could have been endemic among American monkeys when Europeans first arrived and perhaps

attracted no attention until the first epidemic among humans. There is little disagreement on the following list: smallpox, measles, whooping cough, chicken pox, bubonic plague, malaria, diphtheria, amoebic dysentery, and influenza. These were the most lethal of the invaders of the New World in the sixteenth century. Even today the worst immediate threats to the native peoples of remote Amazonia are not the soldiers or road builders per se, but the measles and influenza that they bring with them.

The advantage in bacteriological warfare was (and is) characteristically enjoyed by people from dense and often older areas of settlement moving into sparser and usually newer areas of settlement: the Russians into Siberia, the Chinese into Mongolia, the British into Australia, for example. The diseases that savaged the Amerindians were infections associated with dense populations of humans, which appeared in the Old World long before the New. In addition, it is probable that a number of these diseases were produced by the exchange of microlife between humans and domesticated animals. Such maladies as influenza seem to be renewed in their virulency by exchanges between species and possibly first evolved into human pathogens as the result of such exchanges. Old World peoples domesticated more species of animals than Amerindians and lived in close contact with animals—often literally cheek and jowl, hip and thigh—for much longer. From their animals Old World peoples obtained much more protein, fat, leather, fiber, bone, manure, and muscle power than were available to the Amerindians, and more epidemic and endemic disease as well. Old World peoples adjusted to these infections, socially and immunologically, and were relatively resistant to the diseases. As a result, they practiced bacteriological warfare whenever they went to places remote from the dense populations of the Old World. The Valley of Mexico had fifty devastating epidemics between 1519 and 1810, including smallpox, typhus, measles, mumps, and pneumonia. Even the fragmentary record of Yucatan shows fourteen epidemics. The story of Peru, and of every area for which there are any records, is similar.

"Wherever the European has trod," wrote Darwin after his circumnavigation of the globe on the *Beagle*, "death seems to pursue the aboriginal. We may look to the wide extent of the Americas, Polynesia, the Cape of Good Hope, and Australia, and we find the same result,"[5] which he blamed largely on infectious disease. The Yanomamo of today's Venezuelan-Brazilian borderlands offer a simple explanation for the phenomenon: "White men cause illness; if the whites had never existed, disease would never have existed either."[6]

The most spectacular killer of Amerindians was smallpox, a disease that existed in medieval and Renaissance Europe but did not rise to the first rank of maladies until the sixteenth century. From that time until the spread of vaccination in the nineteenth century, smallpox was one of the Continent's most widespread and deadly diseases, so common that it was considered inevitable among children in areas of dense population. In this period Europe's most important colonies were established in the New World.

Smallpox appeared in the West Indies at the end of 1518 or beginning of 1519 and spread to Mexico on the heels of Cortés, swept through Central America, and preceded Pizarro into the realms of the Incas. Witnesses estimated the losses at one-fourth, one-third, or even one-half of the infected populations. Such estimations may seem extravagantly high, but very high death rates among the unimmunized were not uncommon in more recent, well-documented outbreaks. To cite a few examples of the devastating effects of such epidemics, when smallpox broke out in 1898 among the Moqui Amerindians in Arizona, 632 fell ill. Of the 220 Moqui who refused European-style treatment and, presumably, put their faith in folk therapy (as Aztecs and Incas would have in the early sixteenth century), 163 died; their death rate was over 70 percent. Even twentieth-century therapy could do no more than ameliorate the effects of the disease and prevent secondary infections. In 1972 a pilgrim returning from Mecca brought smallpox to Yugoslavia, where it had not been known for over a generation. Before public health measures stopped the spread of the disease, 174 people contracted smallpox and 35 died, a mortality rate of 20 percent. Readers who are still skeptical about the killing potential of new infections should turn to accounts of the Black Death in the Old World or to a consideration of the potentialities of AIDS in the 1980s. Imagine the consequences if AIDS were not a venereal but instead a breath-borne disease like smallpox.

Although Euro-Americans dubbed America the "virgin land," it had not been virgin for many millenia, if the title is used to mean free from human occupation. By the time Old World settlers, following after the explorers, soldiers, and traders, arrived in numbers in most regions—Venezuela, Alberta, Amazonia—Old World pathogens had so reduced the indigenous population that some special name for the ensuing vacancy was required. Francis Jennings, with chilling appropriateness, replaced the phrase the "virgin land" with the "widowed land."[7]

The widowed land was more open to exploitation than any large area to which western Europeans had access, certainly more open to occupation than the nearest alternative, the lands of eastern Europe,

bloodied for centuries by the *Drang nach Osten*. The success of the invaders of widowed America, particularly of the British in North America, inspired Adam Smith to issue an unintentional prophesy, appropriately dated 1776: "The colony of a civilized nation which takes possession, either of a waste country, or of one so thinly inhabited, that the natives easily give place to new settlers, advances more rapidly to wealth and greatness than any other human society."[8]

In comparison with Eurasia and Africa, both ineradicably populated with their own peoples, the New World was a tabula rasa. Great fortunes could be made in the Americas by exploiting mineral resources and native biota, such as the beaver with its thick, tough fur. The greatest money-maker in America in the first centuries after Columbus, however, was the plantation, which produced tropical and semitropical crops, most of Old World origin, of an at least quasi-addictive nature for the European market. The foremost crop was sugar, followed by cocoa and tobacco, and then such useful items as cotton. Lands with soils and climates suitable for these crops existed in large parts of the New World, but the establishment and operation of plantations required the incessant labor of a great many people. Entrepreneurs tried using Amerindians as slaves and serfs in the hot, wet lowlands where such crops often grew best, but found not only that the Amerindians were intransigent but, worse, that they wilted and died too fast to be useful as laborers.

The plantation masters turned to their own homelands, using persuasion, propaganda, and even kidnapping to get Europeans across the Atlantic. Even shipments of convicts were acceptable. (An English verb for the transportation of these unfortunates, often Celtic backers of the wrong royal family, was "barbadoing," after the island where tobacco and later sugar promised profit.) But few Europeans could be persuaded or forced to become field workers in the American tropics, especially after the spread of malaria and yellow fever. Most Europeans, even serfs, had some civil rights. They could be dragged off to the hot lands of the New World by the thousands, but not by the millions. Until the end of the eighteenth century most of the people who crossed the Atlantic from the Old to the New World, and the majority of those who took up the ax and machete and hoe to labor on the plantations, were black, about 10 million. The Atlantic slave trade, the greatest such trade in all history and the source of revolutionary changes in all of the four continents facing the Atlantic, was part of the legacy of Columbus.

2

The Heirs of Columbus

The bardic historians were relatively unconcerned with the geographic, biological, and demographic effects of the Columbian voyages, but these are the themes of current scholarship. The bulk of the research and analysis on these matters remains to be done, especially on the Columbian influence in Africa and Asia, but I can offer an interim report.

The Effects Intellectual

"Among the extraordinary though quite natural circumstances of my life," wrote Columbus's countryman, the mathematician and physician Girolamo Cardano in the 1570s, "the first and most unusual is that I was born in this century in which the whole world became known; whereas the ancients were familiar with but a little more than a third part of it."[9] In 1491 the European conception of the universe was much the same as it had been a thousand years and more before. The earth was believed to be at the center of crystalline spheres carrying the sun, moon, and stars, with the surface of the world above water divided into three parts—Europe, Africa, and Asia. Humans lived in all three land areas, but not in the Torrid Zone, which was dreadfully hot and therefore uninhabitable. The evidence that did not fit this model was still small enough in significance and quantity to be ignored or subdued to conformity by sophistry. But when Columbus returned in 1493 he rendered the old model obsolete in a stroke. Few realized this immediately, but the system was obviously overloaded with new data and bursting by the time Cardano wrote.

Columbus added a fourth part to the world, the Americas, and his successors added the Pacific, an unimagined ocean of unimaginable breadth beyond America. Columbus and his followers also provided eyewitness testimony that torrid America was full of people. (Europeans had somehow been able to ignore earlier reports of Portuguese

sailors that tropical Africa was heavily populated.) In addition, the New World was full of plants and animals about which Aristotle and Pliny had nothing to say—electric eels and camels without humps—and of people who were neither Muslim nor Jew, and certainly not Christian. Carolus Linnaeus papered his rooms and tormented his methodical Scandinavian mind with drawings of exotic American plants, and Alexander Humboldt and Charles Darwin puzzled over their American experiences and based their generalizations in large part thereon. Philosophers and thinkers from Michel de Montaigne to Jean Jacques Rousseau to Henry David Thoreau pondered and wrote on the meaning of Amerindians and their cultures. The Columbian discoveries galvanized anthropology, the product of Europeans trying to understand non-Europeans, into unprecedented acceleration. Proto-anthropologists and anthropologists from Pietro Martire d'Anghiera to Lewis Henry Morgan and Claude Lévi-Strauss struggled to fit Amerindians, with all their variety of languages, technologies, religions, and customs, into "rational" explanations of social behavior and founded school after school of thought in the process.

Simply by making a round trip across an ocean, Columbus multiplied humanity's knowledge about its environment and itself many times over, stimulating a multitude of philosophies, literary movements, and sciences. He felt himself a crusader and painted crosses on his sails, but he promoted skepticism. Girolamo Cardano worried that the geographical discoveries of his century would lead in just that direction, and "certainties will be exchanged for uncertainties."[10] He was right, of course, but to humanity's advantage.

The Effects Economic

Ask an economist about the significance of Columbus, and the economist might look for a connection between the great explorer and Europe's quantum leap in wealth, commerce, and productivity in the centuries following his life. One of the most apparent and immediate of American influences on Europe during the first post-Columbian centuries was crudely financial. The gold and silver of the New World that raised the pulse beat of ambitious hidalgos and landless younger sons all over western Europe had much the same effect on the European economy. There is no doubt that American specie made possible trade with the Far East that would have been slight otherwise. The Chinese were interested in trading their silks and porcelain with Europeans if they brought Mexican silver. Even so, the exact effect of American

specie on Europe per se is a matter of controversy. The influx of American bullion was surely an important factor in the inflation of the sixteenth and seventeenth centuries, enriching some and impoverishing others and in general subjecting Europe to more chills and fevers than historians have sorted out yet. If indeed prices, and therefore profits, soared faster than wages and traditional fees and rents, and if the decline of interest rates was due to the influx of precious metals from America, then that influx had a great deal to do with the rise of the commercial classes in power and influence and the decline of the old aristocracy, and possibly with the Industrial Revolution.

One of the most important changes in the generations after Columbus was Europe's creation of a world market, with itself as the entrepôt and bank. Vital to this new phenomenon was the trade between the New World and Europe, the former supplying raw materials and the latter manufactured goods. The American market for manufactured goods became increasingly important as Euro-American populations grew. For instance, English exports to the Americas and Africa (where manufactured goods were exchanged for slaves for the American colonies) increased ten times in the eighteenth century. But for the sake of brevity, let us consider the New World colonies exclusively in what was unambiguously their primary role for a very long time, that of supplier of materials for European consumption and processing.

Siberia, like North America, sent its furs to western Europe but alone could never have satisfied the demand, which over centuries was insatiable. The profits of the fur trade could be astonishingly high: Hudson's Bay Company produced an average of 23 percent profit annually for the first fifty years of its existence, a total profit of 1143 percent on the original investment in a half-century. The islands of the eastern Atlantic, the Indian Ocean, and the East Indian archipelago could and did supply sugar and other tropic products to Europe, but the mass of such goods came from America. In the eighteenth century the most profitable colonies in the world were not African, Asian, or even the burgeoning settlements of North America, but the West Indies, or Sugar Islands, as they were often called. The French colony of Saint-Domingue (Haiti and the Dominican Republic today) employed 700 vessels manned by 80,000 seamen in its trade in a good year. In 1789 about two-thirds of France's total foreign investments were involved in Saint-Domingue, the greatest of the Sugar Islands. Britain's West Indian colonies provided 20 percent of the homeland's total imports between 1714 and 1773, much of which were re-exported at a profit. A contemporary estimated that an average Englishman driving

slaves in the sugar plantations brought twenty times more clear profit to England than he would have had he stayed home.

The American plantations were the reason for the existence of the Atlantic slave trade. The lands of southern Asia supplied their own labor and even had a surplus to export when plantation agriculture spread into Oceania. After the sixteenth century the varying, but in total considerable, profits of the Atlantic trade in black laborers flowed largely to the nations leading the commercial and industrial revolutions: Holland, France, and Britain. Portugal was also a major recipient of slave-trade profits but could not hold on to them; they slipped away to join the main current of wealth streaming to Portugal's northern neighbors.

The world market, unimagined when Columbus sailed, was a hardy infant by the end of the sixteenth century. A century later, the world market was an important factor in the lives of millions of people in every continent but Australia and Antarctica, drawing coffles of slaves out of Africa every year, herding Amerindians up and down the ladders of the Potosí silver mines, and dispatching Cree braves to trap beaver in the Canadian forests, in addition to what it was dictating to Gujaratis and Filipinos on the other side of the world. For the first time human labor, raw materials, manufacturing, and transportation systems spanning scores of degrees of longitude and latitude by sail, wheel, and beast of burden were organized on a world scale. The world economy was created by bankers and statesmen, such as the Fuggers and Colbert, but Columbus and his fellow explorers played vital roles, too. These sailors presented entrepreneurs with access to enough land in enough climates, enough bullion, enough visions of potential profit, to spur them from a walk to a gallop. Once in existence, the world market produced a torrent of wealth that swept round and round the globe to and from Ceylon, the Ottoman Empire, Pernambuco, Massachusetts, Java, Muscovy, Quebec, and on every passage Europe took its tithe.

A lot of that capital went to building Brobdingnangian manor houses and to providing fireworks on ducal birthdays, but much was also invested in roads, canals, bridges, warehouses, and the training of naval, clerical, mechanical, and executive talent. The wealth of the New World was not the only cause of the Industrial Revolution, but it is difficult to see how that mysterious and awesome transformation could have happened when and as rapidly as it did without stimulus from the Americas. The Industrial Revolution left Europeans and their descendants overseas richer and with access to more power than men and women of 1492 ever thought possible. Its effects continue today, as

other peoples break loose from old moorings and bobble along in the European wake, heading for an age of either material satisfaction or towering disappointment. Columbus's bequest is a sharp sword, and in this case we cannot be sure whether we hold it by the handle or the blade.

The Effects Nutritional

"The greatest service which can be rendered any country is to add a useful plant to its culture . . . ,"[11] noted Thomas Jefferson. By this standard, Columbus was the greatest benefactor of all time because by bringing the agricultures of the Old and New Worlds into contact, he added many useful plants to each. He enormously increased the number of kinds and quantities of food available to humans by giving them access to all the masterpieces of plant and animal breeders everywhere, and not just those of two or three contiguous continents.

In the last five hundred years food crops and domesticated animals have crossed the Atlantic and Pacific in both directions, enabling people to live in numbers in places where they previously had had only slim means to feed themselves. The Argentine pampa, Kansas, and Saskatchewan, too dry in large areas for Amerindian maize and in the latter case too far north, are now breadbaskets, producing not only enough Eurasian wheat for themselves but much more to export to the world. Eurasia's domesticated animals—cattle, sheep, pigs, goats, and even water buffalo—provide Americans from the Hudson Bay to the Straits of Magellan with the means to do what was only meagerly possible before 1492: to turn grass, which humans cannot eat, into meat and milk. In 1983, according to the Food and Agricultural Organization (FAO) of the United Nations, the New World slaughtered 84 million cattle, 27 million sheep, and 139 million pigs; in 1492 none at all. New World peoples derive all but a fraction of their animal protein, and almost all their wool and leather, from Old World animals.

Conversely, cassava, a root plant of South American origin, provides calories for multitudes of Africans and Asians in areas previously too wet, too dry, or too infertile to support more than sparse populations. Similarly, as the white potato of South America spread across northern Europe, peasants from county Kerry to the Urals found themselves with the means to raise more food in bulk per unit of land than ever before (although ultimately there were dire results in Ireland, where an American pestilence arrived to destroy the American plant in the 1840s). In the Far East the impact of the arrival of the products of Amerindian plant breeders was at least as great as in Europe or Africa.

By the late 1930s New World crops amounted to 20 percent of the food produced in China, where approximately one quarter of the human race lived (and lives now). According to Ping-ti Ho, historian of Chinese demography and agriculture: "During the last two centuries, when rice culture was gradually approaching its limit, and encountering the law of diminishing returns, the various dry land food crops introduced from America have contributed most to the increase in national food production and have made possible a continual growth of population." [12]

In 1983 Amerindian maize accounted for over one-sixth of all the grain produced in the world. Not surprisingly, the United States is the world's largest producer, but, perhaps surprisingly, China is the second greatest producer. China also harvests more sweet potatoes, a native American plant that does marvelously well under conditions that would discourage most other crops, than any other nation; sweet potatoes are an old and dependable famine food for the Chinese. Globally, American root crops, of which the most important are white and sweet potatoes and cassava, exceed in quantity of production all others combined. The world produced 557 million metric tons of root crops in 1983, of which those of Amerindian domestication amounted to 524 million metric tons. The world's leading producer of white potatoes is the Soviet Union, which forks up ten times more potatoes in weight than South America, the home continent of the tuber. Africa produces over 48 million metric tons of cassava, dwarfing the 28 million of South America, where the plant was first cultivated.

The significance of Amerindian crops in the future will increase because all the most important ones were first domesticated in the tropics, where many of them still grow best. The developing nations of the world, where human populations are expanding fastest, are mostly in the tropics and in hot, wet lands nearby. The maize production of the developed world in 1983 was 187 million metric tons, and that of the developing world about 30 million less, but a great deal of the former tonnage went to feed livestock while almost all the latter went directly to feed people. The sweet potato production of the developed societies in the same year was 2 million metric tons, and that of the developing societies over 112 million. All of the cassava raised in 1983 about which the FAO has statistics (123 million metric tons) was raised in the developing nations. Compare these figures with those for wheat, the traditional staple since the Neolithic Age in temperate Eurasia: 300 million metric tons were produced by the developed nations, and not quite 200 million by the developing.

Between 1750 and 1986 the population of the world grew from

approximately 750 million to 5 billion. The exchange of crops and domesticated animals between the Old and New Worlds cannot be credited with being the sole cause of this awesome increase, any more than the capital produced by Europe's exploitation of America can be said to be the only cause of the Industrial Revolution, but it is hard to see how the colossal effect could have come about without the Columbian exchange.

The Effects Demographic

The impact of the Columbian exchange did not always enhance population growth. Columbus triggered population explosion among some peoples and implosion in others. His effect on the Amerindian population, for example, was annihilating.

Fifty years ago Alfred Kroeber, then perhaps the premier anthropologist in the United States, estimated the total Amerindian population of 1492 at 8.5 million. He believed that his figure might possibly be a bit low, but it is unlikely that he thought that scholars would ever conservatively estimate the number of fifteenth-century Amerindians at 30 to 50 million, or that others, at least as well informed, would not hesitate to say 100 million. Extraordinary numbers! At that time Europe from the Atlantic to the Urals had only 80 million people, with Spain's population perhaps 7 million.

The mammoth increase in the estimates of fifteenth-century Amerindian populations during the past few decades quite properly arouses skepticism because the data these figures are based on are, by twentieth-century standards, disconcertingly imprecise. These estimates are the end results of careful examination and meticulous analysis of all the sources available (which are admittedly doubtful, if taken one at a time, but in total impressive). These include the off-the-cuff guesses of the first Europeans to arrive in a given area, the sober judgments and censuses of colonial administrators and churchmen, travelers' accounts, and whatever other scraps of pertinent information that can be found. All are measured against approximations of the carrying capacity of the environment and the size of the Amerindian population suggested by the density of pre-Columbian artifacts and ruins. These figures are matched against each other and then tested by sophisticated demographic techniques, such as careful extrapolation backwards from later and more credible data. At the end the demographic historians make their estimates. We can and should argue about these estimates, but we should also note that they do not stand in suspicious uniqueness: The sources about

Australia, New Zealand, and the Pacific islands also indicate that their aboriginal populations were much larger when Europeans first arrived than two or three generations later.

Skepticism is imperative in this new field, as it is in the field of the demographic history of medieval Europe, but not stubborn adherence to a half-century-old orthodoxy. After all, the New World had one-fourth of the land surface of the globe and was rich in sources of food; Amerindians had many thousands of years to expand their numbers before Columbus arrived. It seems only sensible to begin with the assumption that there were a lot of Americans in 1492.

The traditional underestimations of Amerindian populations were due not so much to Euro-American ethnocentrism, though this may have played a role, as to the steep plunge of New World populations very soon after Old World peoples entered a given region. The germs sickened and killed thousands, setting off cascades of mortality. For instance, decimation of young adults interrupted farming and hunting, and malnutrition and even starvation followed. As elders died, the old customs went with them to the grave, leaving vacuums and bequeathing despair and anomie to the young. Typically, by the time two or three generations had passed after an initial white settlement, the Amerindian population of the given region was so low that it made the offhanded estimates of the first explorers and conquerors seem extravagant. By the time libraries were founded, colleges were opened, and historians were sharpening their pencils, the local Amerindians were often either extinct or few in number. The crucial first step for demographic historians of the Amerindians is to decide how steep their plunge in numbers was.

The population losses were undisputably considerable and swift. The angle of descent that Sherburne F. Cook and Woodrow Borah offer for central Mexico starts at about 25 million Amerindians at the beginning of the 1520s, falls to 11.2 million in 1532, to 4.7 million in 1548, to 2.2 million in 1568, and to a nadir of 852,000 in 1608. Even if the controversial first estimate is ignored, the drop from 1532 to 1608 is more than 90 percent. The drop from the dependable 1568 number to 1608's equally respectable total is over 60 percent. David Noble Cook, after painstaking research and analysis, puts forward an educated guess of 9 million for the population of Amerindian Peru in 1520, and a solid figure of 600,000 for the region of a century later, again a decline of over 90 percent.

Relatively isolated regions like Yucatan, where the full impact of European invasion was diffused over time, may have suffered smaller declines. But peripheral areas did not necessarily suffer less because of

their remoteness or even because of a lower density of population: climate and the amount and kinds of food available must always be taken into consideration. In the cold regions of the far north and south, a crisis, if it struck during the season when vital food resources such as salmon were fleetingly available, could be extremely dangerous. Feverish lowlands, whatever their populations and locations, often lost close to 100 percent of their aboriginal populations. At the beginning of the eighteenth century John Lawson estimated that smallpox and rum had reduced the Amerindians within two hundred miles of Charleston, South Carolina, by five-sixths in only fifty years. A governor of the colony expressed thanks to God for having sent an "Assyrian Angel" among the aborigines with "Smallpox &c. to lessen their numbers: so that the *English*, in Comparison with the *Spaniard*, have but little *Indian* Blood to answer for."[13]

The study of Amerindian demographic history is still at an early stage, and even if enriched with scores of careful local studies (the indispensable next step) will never be a precise science. Conclusions will always be accompanied by caveats that the final figures are *probably* accurate, plus or minus 10 or 20 or 30 percent. But careful studies, fashioned by meticulous and mutually critical scholars, are already producing great advances in the understanding of the American past. After all, in a field where within living memory one expert offered 8.5 million for the 1492 population of the New World and others 100 million, studies producing conclusions dependable within even 50 percent either way are encouraging.

Already we can be sure that in 1492 the populations of the various regions of the New World were comparable in density to similar regions of the Old. Columbus's arrival in America was much more like Marco Polo visiting the Far East, with its advanced empires and primitive tribes, than Robinson Crusoe landing on a desert island. Mexico and Peru obviously had millions of people living in complex societies. Other regions had smaller populations and their societies were not as advanced, but no informed person today would think of endorsing George Bancroft's statement that before whites came to what is now the United States, the area was "an unproductive waste . . . its only inhabitants a few scattered tribes of feeble barbarians, destitute of commerce and of political connection."[14]

3

Assessing the Columbian Exchange

The effects of establishing permanent links between continents that had been separate, and thereby interweaving divergently evolved biotas and human cultures, were and are too vast to be measured for many centuries and probably millenia, but already the demographic effects of the Columbian exchange are awesome.

Of the three human groups chiefly involved in the linkages between the two worlds—Europeans and Euro-Americans, Africans and Afro-Americans, and Amerindians—the first has benefited most, by the obvious standard, population size. According to the demographer Kingsley Davis, about 50 million Europeans migrated to the New World between 1750 and 1930, and the populations of the lands to which most of them went increased 14 times, while that of the rest of the world increased by 2.5 times. In that same 180 years the number of Caucasians on earth increased 5.4 times, Asians only 2.3 times, and black Africans and Afro-Americans less than 2 times. One may justifiably question the definitions of the terms Caucasian, Asian, African, and Afro-American, but problems of differentiation should not prevent noting that Columbus benefited some kinds of people far more than others.

Columbus's legacy to black Africans and their descendants is mixed. An estimated 10 million Africans crossed the Atlantic to the Americas, where they worked and died as chattel, to the incalculable benefit of their captors and owners. The slave trade transformed West African society, turning its commerce about-face from the Saharan border and the Mediterranean societies to the Atlantic and the New World, enriching some peoples and creating powerful states, and decimating others and destroying them as political and cultural entities. A cold reckoning of the number of black Africans and Afro-Americans suggests that there are now more of them in total than there would be if the slave trade had never existed. Even if the multitudes who died in the Middle Passage and in African wars stimulated by the slave trade

were added to the millions of Africans who arrived in the New World, the total of people lost to Africa was probably fewer than were added because of the cultivation of Amerindian crops brought to Africa by the slavers. The number of Afro-Americans in 1950 was about 47 million, approximately one-fifth of all the blacks on the planet.

Columbus was the advanced scout of catastrophe for Amerindians. There were a few happy sequelae—the flowering of equestrian cultures in the American grasslands, for instance—but on balance, the coming of whites and blacks brought disease, followed by intimidation, eviction, alcoholism, decapitation of the ruling classes from the peasant bodies of the advanced Amerindian cultures, and obliteration of many peoples and ways of life. The European invasion of the New World reduced the genetic and cultural pools of the human species, as did, to at least some extent, the advance of Chinese settlers into the Szechuan wilderness and the tropical forests of southeast Asia, and the descent of Incan armies down the eastern slopes of the Andes into the jungles. When strangers meet, the degree of difference between their bacterial florae can make more history than the differences between their customs.

The Amerindian population crash in a given area usually lasted no more than one or two hundred years and was followed by a recovery (if there was to be one at all), slow at first and probably not matching the rate of increase of the rest of humanity until the twentieth century. If the nadir populations for Amerindians of the various regions of the New World were added (nadirs were reached in the Caribbean islands by about 1570; in North America not perhaps until 1930), the sum would be about 4.5 million. Although this is no better an informed guess (how was Amerindian defined by the time these populations bottomed out?), in order of magnitude it is acceptable. If this figure is compared to any of the currently and widely respected estimates of Amerindian population in 1492, even to the lowest, 33 million, the conclusion must be that the major initial effect of the Columbian voyages was the transformation of America into a charnal house. The degree to which we have misunderstood our own history is the distance between this undoubted truth, appalling but now solidly established, and the view expressed by the designers of the 1629 seal of the Massachusetts Bay Colony, on which a figure of an Amerindian, longing for a chance to improve himself, calls out, "COME:OVER:AND:HELP:VS." [13] Samuel Eliot Morison repeated this view of the relationship between the Old and New Worlds three centuries later in the peroration to his magnificent *The European Discovery of America:* "To the people of this New World, pagans expecting short and brutish lives, void of hope for any future,

had come the Christian vision of a merciful God and a glorious Heaven." [16] We neither ignore nor reconcile ourselves to the sometimes bloody religions of the Amerindians, nor condemn Morison for anything worse than being immured in his own ethnicity, in saying that his was a very selective view of what was surely the greatest tragedy in the history of the human species.

The classic historians of the United States who specialized in the first centuries after the Columbian voyages provided the stories, often deeply researched, accurate, and superbly written, of a small number of white heroes who usually won their battles or who, like Columbus and the Marquis de Montcalm, were noble in defeat. These scholars echoed and amplified a folk version of American history, a hybrid offspring of successful revolution and romantic nationalism, so scanty in disasters and humiliations and so Whiggish in its optimism and blandness that Nathaniel Hawthorne, looking for materials for his novels, complained of his country: "there is no shadow, no antiquity, no mystery, no picturesque and gloomy wrong, nor anything but a common-place prosperity, in broad and simple daylight. . . ." [17] The most recent scholarship places beside that plaint a sixteenth- or early seventeenth-century document in the Nahuatl language in which an Aztec matron visits a younger woman in Texcoco to congratulate her on her two sons. The older woman calls the boys "precious jewels and emeralds," as indeed they were at that time, for miscarriages, stillbirths, and deaths of children were common. "Hardly anyone who is born grows up, they just all die off," she says. Her mind strays back to her youth, before the conquest and the new god, when the number of rulers and nobles had been many, the commoners beyond counting, and the slaves as numerous as ants. "But now everywhere our Lord is destroying and reducing the land, and we are coming to an end and disappearing. Why? For what reason?" [18]

American historians, if they will grasp this nettle and accept their responsibility to answer her question, will gain in knowledge of the multiplicity of forces impinging upon humanity in all centuries, most of which their liberal arts educations have not prepared them to perceive. They will also gain a sense of tragedy, at present largely missing from at least North American scholarship and essential to mature consideration of the course of our species through time. There is a lot of work to be done. The study of history, said Marc Bloch, "having grown old in embryo as mere narrative, for long encumbered with legend, and for still longer preoccupied with only the most obvious events . . . is still very young as a rational attempt at analysis." [19]

Notes

[1] George Bancroft, *History of the United States, from the Discovery of the American Continent* (Boston: Little, Brown and Co., 1834–73), I: 4.

[2] Christopher Hibbert, *The Dragon Awakes: China and the West, 1793–1911* (Harmondsworth: Penguin Books, 1984), 234.

[3] Eric R. Wolf, *Europe and the People without History* (Berkeley: University of California Press, 1982).

[4] Pierre Chaunu, *European Expansion in the Later Middle Ages*, trans. Katherine Bertram (Amsterdam: North Holland Publishing Co., 1979), 106.

[5] Charles Darwin, *The Voyage of the Beagle* (Garden City: Doubleday and Co., 1962), 433–34.

[6] Donald Joralemon, "New World Depopulation and the Case of Disease," *Journal of Anthropological Research* XXXVIII (Spring 1982): 118.

[7] Francis Jennings, *The Invasion of America. Indians, Colonialism and the Cant of Conquest* (Chapel Hill: University of North Carolina Press, 1975), 15–31.

[8] Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (London: Oxford University Press, 1976), II: 564.

[9] Jerome Cardano, *The Book of My Life*, trans. Jean Stoner (London: J. M. Dent and Sons, 1931), 189.

[10] Ibid.

[11] John P. Foley, ed., *The Jeffersonian Cyclopedia* (New York: Funk and Wagnalls Co., 1900), 25.

[12] Ping-ti Ho, *Studies on the Population of China, 1368–1953* (Cambridge, Mass.: Harvard University Press, 1959), 191–92.

[13] B. R. Carroll, ed., *Historical Collections of South Carolina* (New York: Harper and Brothers, 1836), II: 89.

[14] Bancroft, *History of the U.S.*, I: 3–4.

[15] Jennings, *Invasion of America*, 229.

[16] Samuel Eliot Morison, *The European Discovery of America: The Southern Voyages, 1492–1616* (New York: Oxford University Press, 1974), 737.

[17] Nathaniel Hawthorne, *The Marble Faun* (Boston: Houghton, Mifflin and Co., 1888), 15.

[18] Frances Karttunen and James Lockhart, *The Art of Nahuatl Speech: The Bancroft Dialogues* (Los Angeles: UCLA Latin American Center Publications, forthcoming).

[19] Marc Bloch, *The Historian's Craft*, trans. Peter Putnam (New York: Alfred A. Knopf, 1961), 13.

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